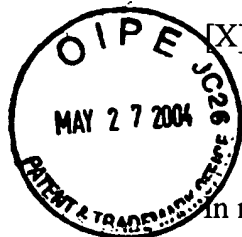


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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: SUNDARAM, Mani et al.

Group Art Unit: 2878

Serial No.10/781,523

Examiner:

Filed: 02/18/2004

Atty. Dkt. No: 20030128-CIP

For: QWIP WITH ENHANCED OPTICAL COUPLING

To: Mail Stop IDS
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

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Date: May 24, 2004

Debra A. Langevin
[] Debra A. Langevin

Commissioner:

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT

Transmitted herewith is the Applicant's Information Disclosure Statement, 2 sheets form PTO/SB/08A and/or PTO/SB/08B, and 7 references and other information. Pursuant to 37 CFR 1.98 (a)(2)(i) applicant has not transmitted herewith copies of cited U.S. Patents and U.S. patent application publications as the above application was filed after June 30, 2003. Please enter in the above application and communicate in all related matters with the undersigned.

DEPOSIT ACCOUNT **190130** AUTHORIZATION – All necessary fees are intended to be included, however the Office is hereby authorized to charge any deficiency or credit any overpayment in the fees to the above deposit account, owned by BAE SYSTEMS Information and Electronic Systems Integration Inc. an authorized signator for which is Kevin M. Perkins, V.P. & Company Counsel, and for whom the undersigned are authorized agents.

Respectfully submitted,

Scott J. Asmus
Scott J. Asmus, Reg. No. 42,269
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Date: May 24, 2004

Debra A. Langevin
[X] Debra A. Langevin

Commissioner:

INFORMATION DISCLOSURE STATEMENT

Applicants submit this statement and the attached 2 sheet(s) of form PTO/SB/08A and/or PTO/SB/08B and 7 references and other information in accordance to the duty of disclosure under 37 C.F.R. §§1.56, 1.97, and 1.98, and requests consideration hereof. Pursuant to 37 CFR 1.98 (a)(2)(i) applicant has not transmitted herewith copies of cited U.S. Patents and U.S. patent application publications as the above application was filed after June 30, 2003.

Compliance with 37 C.F.R. §1.97: This Information Disclosure Statement is filed within three (3) months of the filing date of a National Application or before the mailing date of a first office action on the merits. No fee or certification is required.

Information Cited: The Applicants hereby make of record in the above-identified application, the information listed on the attached form PTO/SB/08A and/or PTO/SB/08B. The order of presentation of the references should not be construed as an indication of the importance of the reference. As all the references listed on attached Form PTO/SB/08A and/or PTO/SB/08B are in English, no commentary is required.

Remarks: A copy of each reference, together with a listing on Form PTO/SB/08A and/or PTO/SB/08B, is submitted herewith. Applicants respectfully request that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;

2. The enclosed form PTO/SB/08A and/or PTO/SB/08B be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application; and

3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicants make no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

By submitting this Information Disclosure Statement, the Applicants make no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

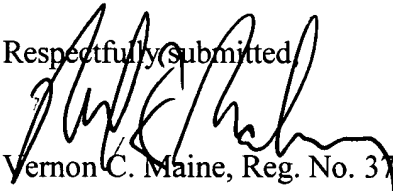
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Notwithstanding any statement by the Applicant, the Examiner is urged to form his own conclusion regarding the relevance of the cited information.

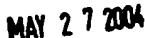
An early and favorable action is hereby requested.

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Respectfully submitted,



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Andrew P. Cernota, Reg. No. 52,711
Attorneys/Agents for Applicant



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|------------------------|----------------|
| Application Number | 10/781,523 |
| Filing Date | 02/18/2004 |
| First Named Inventor | SUNDARAM, Mani |
| Art Unit | 2878 |
| Examiner Name | |
| Attorney Docket Number | 20030128-CIP |

[illegible][illegible]Date
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| | | Filing Date | 02/18/2004 |
| | | First Named Inventor | SUNDARAM, Mani |
| | | Art Unit | 2878 |
| | | Examiner Name | |
| Sheet 2 | of 2 | Attorney Docket Number | 20030128-CIP |

| NON PATENT LITERATURE DOCUMENTS | | | |
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| | | "Tridirectional Gratings as Improved Couplers for QWIPs", NASA Tech Briefs, May 2000, pp 1-3, NPO-20703, NASA'S JET PROPULSION LABORATORY, Pasadena | |
| | | "Metal Side Reflectors for Trapping Light in QWIPs", NASA Tech Briefs, June 2003, pp 1-2, NPO-30507, NASA'S JET PROPULSION LABORATORY, Pasadena, CA. | |
| | | "qwip:Frequently Asked Questions", qwip.jpl.nasa.gov, 2000, pp 1-2, NASA Jet Propulsion Laboratory, Pasadena, CA. | |
| | | "qwip:Frequently Asked Questions", qwip.jpl.nasa.gov, 2000, pp 1-3, NASA Jet Propulsion Laboratory, Pasadena, CA. | |
| | | GUNAPALA, S. D. et al., "640x512 Pixel Four-Band, Broad-Band, and Narrow-Band Quantum Well Infrared Photodetector Focal Plane Arrays", pp 1-12. | |
| | | GUNAPALA, S. D. et al., "640x486 Long-wavelength Two-color GaAs/AlGaAs Quantum Well Infrared Photodetector (QWIP) Focal Plane Array Camera", pp 1-24. | |
| | | GUNAPALA, S. D. et al., "Quantum Well Infrared Photodetector (QWIP) Focal Plane Arrays", Semiconductors and Semimetals, 1999, pp 1-83, Vol. 62. | |
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